Commonwealth of Kentucky
Division for Air Quality

RESPONSE TO COMMENTS

ON THE TITLE V DRAFT PERMIT NO. V-05-076
CELANESE, LTD
408 NORTH MAIN STREET, CALVERT CITY, KY 42029
JUNE 5, 2007
JULIAN BRECKENRIDGE, REVIEWER
SOURCE I.D. #: 021-157-00055
SOURCE A.I. #: 40292
ACTIVITY #: APE20040001

SOURCE DESCRIPTION:

Celanese, Ltd.'s Calvert City operations are a synthetic organic chemical manufacturing industry (SOCMI). Celanese purchased the Calvert City Polyvinyl Alcohol plant from Air Products and Chemicals, Inc. on September 29, 2000. The source produces polyvinyl alcohol (PVOH) using vinyl acetate, methanol, sodium hydroxide, and a peroxide catalyst. Acetic acid is produced as a byproduct. The PVOH plant is divided into the following areas:

i. Polymerization (Poly): Vinyl acetate monomer (VAM) is continuously polymerized to polyvinyl acetate (PVAc). The reaction uses methanol and organic peroxide.
ii. Saponification (SAP): Following polymerization, the PVAc in methanol is hydrolyzed to dry polyvinyl alcohol (PVOH) using sodium hydroxide as a catalyst.
iii. Polyrectification: VAM and methanol from the Polymerization area are separated to recover and recycle VAM and methanol.
iv. Wedco: PVOH from the SAP Area is dry grinded into the final PVOH product.
v. Acetic Acid Recovery (AAR): The mother liquor (mixture of methanol and methyl acetate) from the SAP area is processed to extract and recycle the methanol. Methyl acetate is converted to acetic acid and methanol in ion exchange beds. The methanol from this reaction is also recovered and recycled. The acetic acid is de-watered and sent out as final product.
vi. Flare: The flare currently controls organic compound emissions from the Polyrectification and AAR Areas. The source plans to utilize the flare to control organic compound emissions from the Poly Area.
vii. Tank Farm: The area consists of 26 tanks that hold the raw materials and intermediate process streams.
viii. Loading Area: Materials are shipped and received by truck and railcar.

PUBLIC AND U.S. EPA REVIEW:

On April 11, 2007, the public notice on availability of the draft permit and supporting material for comments by persons affected by the plant was published in *Marshall County Tribune Courier* in Benton, Kentucky. The public comment period expired 30 days from the date of publication.

Comments were received from Celanese, Ltd. of Calvert City, Kentucky on May 11, 2007. Attachment A to this document lists the comments received and the Division's response to each comment. Minor changes were made to the permit as a result of the comments received, however, in no case were any emissions standards, or any monitoring, recordkeeping or reporting requirements relaxed. Please see Attachment A for a detailed explanation of the changes made to the permit. The U.S. EPA has 45 days to comment on this proposed permit.

CREDIBLE EVIDENCE:

This permit contains provisions, which require that specific test methods, monitoring or recordkeeping be used as a demonstration of compliance with permit limits. On February 24, 1997, the U.S. EPA promulgated revisions to the following federal regulations: 40 CFR Part 51, Sec. 51.212; 40 CFR Part 52, Sec. 52.12; 40 CFR Part 52, Sec. 52.30; 40 CFR Part 60, Sec. 60.11 and 40 CFR Part 61, Sec. 61.12, that allow the use of credible evidence to establish compliance with applicable requirements. At the issuance of this permit, Kentucky has only adopted the provisions of 40 CFR Part 60, Sec. 60.11 and 40 CFR Part 61, Sec. 61.12 into its air quality regulations.

ATTACHMENT A

Response to Comments

Comments on Celanese, Ltd. Draft Title V Air Quality Permit submitted by Kevin Windstrup of Celanese, Ltd.

Each comment is displayed according to the numbering on the comment page, and the Division's response will follow that comment (See Attachment B for the copy of the Comments on Draft Title V):

A. SUBSTANTIVE COMMENTS

This Section of Attachment 1 sets out the substantive comments on the proposed permit conditions in the Draft Title V Permit and on the content of the Statement of Basis for the permit. Upon reviewing the Draft Title V Permit, a number of significant issues have been identified and those concerns are set out in this Section. As a result, Celanese is requesting that the KDAQ rescind this version of the Draft Title V Permit and prepare a new draft. The changes that Celanese believes are needed significantly affect the emission limits, monitoring, recordkeeping, and reporting requirements and thus by their very nature are considered significant under KDAQ's permitting program. Upon further discussions between the KDAQ and Celanese and after revisions are made, KDAQ would be able to afford the public another 30-days to review the Revised Draft Title V permit. Celanese believes this approach would result in a more meaningful opportunity for public review and an overall improved permit product.

1) **Regulation 40 CFR 60, Subpart VV (40 CFR § 60.480),** ***Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry*** **is not applicable to the Polyrectification and Acetic Acid Recovery Process areas.**

   Pursuant to 40 CFR § 60.480 (a), the provisions of NSPS Subpart VV apply to affected facilities in the synthetic organic chemicals manufacturing industry. The group of all equipment within a "process unit" is an "affected facility" for purposes of the regulation. Pursuant to 40 CFR § 60.481, a "process unit" is defined as "components assembled to produce, as intermediate or final products, one or more of the chemicals listed in §60.489 of this part. A process unit can operate independently if supplied with sufficient feed or raw materials and sufficient storage facilities for the product." (Emphasis added)

As discussed in the Background Information Document (BID) for Subpart VV (EPA-450/3-80-033b), page 5-24, the intent of this rule is to cover process units that produce the chemicals listed in Section 60.489, either by chemical reaction or by other processing means, such as separation and purification techniques. U.S. EPA also states that the presence of listed chemicals in the final product does not infer production of these chemicals. It was not the intent to cover the use of the listed chemicals as raw materials. Rather, the intent of NSPS Subpart VV is to regulate the production of the chemicals listed in 40 CFR § 60.489.

Vinyl acetate is one of the chemicals listed in 40 CFR § 60.489 and is present in the product stream from the Polyrectification area. However, vinyl acetate is introduced into the Polyrectification area as a raw material. Specifically, vinyl acetate monomer and methanol from the Polymerization area are introduced into the Polyrectification area where they are separated using series of extraction, recovery, and condensation steps. The only reason that vinyl acetate is present in the product stream is because it is introduced as a raw material in the input stream. Therefore, the Polyrectification area does not manufacture vinyl acetate as a product or intermediate. In Attachment 2 to the comment letter, Celanese has included relevant applicability determination memorandums from U.S. EPA's Applicability Determination Index (ADI) website - http://cfpub.epa.gov/adi/. Each of the memorandums provided demonstrate that NSPS Subpart VV does not apply to the Polyrectification area at the Calvert City plant. Celanese requests that all NSPS Subpart VV requirements be deleted for Polyrectification and Acetic Acid Recovery (AAR) process areas.

A determination has also been made that NSPS Subpart VV does not apply to the AAR area as reflected on page 20 of the Statement of Basis; however, reference to NSPS Subpart VV is included in the draft Title V permit on page 76 for AAR area.

Accordingly, please revise sections of the draft Title V permit and Statement of Basis by deleting the reference to Subpart VV. The references can be found at the following locations:

> *Page 46 of 162 of the Draft Title V Permit, Applicable Regulations.*
> *Page 49 of 162 of the Draft Title V Permit, Operating Limitations, Condition 1.j.*
> *Page 76 of 162 of the Draft Title V Permit, Operating Limitations, Condition 1.f., and*
> *Page 19 of 24 of the Statement of Basis, Applicable Regulations, Paragraph 3 (n).*

Division's Response: Chemical recovery is generally exempt from the standard, if the purified chemical is used in the same distillation process unit. Polymerization reactors use the vinyl acetate monomer that is recovered from the polyrectification area in the polymerization area. The Division originally

believed (when writing the draft permit) that vinyl acetate is not used in the Polyrectification area, but is produced as an intermediate. A response by email from Keith Goff, an EPA contact for New Source Performance Standards (NSPS), was received by the Division on June 27, 2007regarding the terminology "distillation process unit." Distillation process unit refers to the process unit in which the distillation unit is located, rather than to designate the distillation unit itself as a separate process unit. The affected facility under Subparts VV and NNN (i.e., distillation unit (s) / recovery system (s)) are not described as being separate "process units" but as part of a process unit producing a listed chemical. The Polyrectification area uses the distillation operation to recover and purify vinyl acetate for reuse in the same distillation process unit to produce polyvinyl acetate. Chemical recovery is exempt from this regulation; therefore, 40 CFR 60, Subpart VV (40 CFR 60.480) does not apply to the Polyrectification area at Celanese Ltd Calvert City plant.

Regulation 40 CFR 60 Subpart VV applies to the Acetic Acid Recovery (AAR) process area because acetic acid is produced as a product. The facility may comply with 40 CFR 60 Subpart VV by complying with that regulation directly. The facility must comply with 40 CFR 63 Subpart H, where Subpart H is applicable. However, the facility shows compliance with 40 CFR 60, Subpart VV, ***if*** *the units in the area are applicable to 40 CFR 63, Subpart H, pursuant to 40 CFR 63.160 (b)(1)* ***or*** *the units voluntarily comply with 40 CFR 63 Subpart H. Therefore, the Division has changed the applicability in the Statement of Basis and permit, concerning 40 CFR 60, Subpart VV to the following:*

> *40 CFR 60, Subpart VV (40 CFR 60.480), Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry, is applicable to the Acetic Acid Recovery (AAR) process area because acetic acid is produced as a product. The facility may comply with 40 CFR 60 Subpart VV by complying with that regulation directly. The facility must comply with 40 CFR 63 Subpart H, where Subpart H is applicable. However, the facility shows compliance with 40 CFR 60, Subpart VV,* ***if*** *the units in the area are applicable to 40 CFR 63, Subpart H, pursuant to 40 CFR 63.160 (b)(1)* ***or*** *the units voluntarily comply with 40 CFR 63 Subpart H.*

The Division has changed the non-applicable regulations in the Statement of Basis and permit, concerning 40 CFR 60, Subpart VV to the following:

> *40 CFR 60, Subpart VV (40 CFR 60.480), Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry, is not applicable to the Saponification Area units, as these units do not produce chemicals listed under 40 CFR 60.489. Also, chemical recovery is exempt from the standard, if the purified chemical is used in the same distillation process unit. Subpart VV is not applicable to the Polyrectification area because this area is a part of the*

distillation unit of the Polymerization area where a listed feedstock chemical, vinyl acetate, is used in the Polymerization area and recovered in the Polyrectification area to produce a non-listed chemical, polyvinyl acetate.

2) **40 CFR 60, Subpart NNN (40 CFR § 60.660)*, Standards of Performance for VOC from Synthetic Organic Chemicals Manufacturing Industry Distillation Operations* is not applicable to the Polymerization Area or the Polyrectification areas because the emission units in this area do not produce chemicals listed under §60.667.**

Page 20 of 24 of the Statement of Basis, paragraph **4.(c)** states:

> *"40 CFR 60, Subpart NNN, Standards of Performance for Volatile Organic Compound (VOC) Emissions From Synthetic Organic Chemical Manufacturing Industry (SOCMI) Distillation Operations, is not applicable to the Polymerization Area units, as the emission units in this area do not produce chemicals listed under §60.667. This rule is not applicable to the Polyrectification Area because chemical recovery is exempt from this regulation since the distillation operation, which is used to recover and purify a listed feedstock chemical, vinyl acetate, for reuse in the same distillation process unit to produce a non-listed chemical, polyvinyl acetate. This rule is not applicable to the AAR Area units, pursuant to 40 CFR 63.110(d)(4), Subpart G."*

Celanese agrees with KDAQ's determination as listed in paragraph **4.(c)** on page 20 of 24 of the Statement of Basis. This determination is corroborated by the applicability determination memorandums included in Attachment 2 to this letter. However, the non-applicability referenced in paragraph **4.(c)** on page 20 contradicts the applicability paragraph **3.(o)** on page 20 of 24 of the Statement of Basis. Therefore, Celanese requests the following:

Page 46 of the draft permit, **APPLICABLE REGULATIONS**: Please delete reference to 40 CFR 60, Subpart NNN.

Page 20 of the statement of basis, **APPLICABLE REGULATIONS**: Please delete paragraph 3(o).

Division's Response: (Refer to the response to comment #1) 40 CFR 60, Subpart NNN, Standard of Performance for Volatile Organic Compound (VOC) Emissions From Synthetic Organic Chemical Manufacturing Industry (SOCMI) Distillation Operations, is not applicable to the Polymerization Area units, because these units do not produce chemicals listed under 40 CFR 60.667. The provisions of this subpart do not apply to the Polyrectification Area because chemical recovery is exempt from this regulation since the distillation operation, which is used to

recover and purify a listed feedstock chemical, vinyl acetate, for reuse in the same process unit (Polymerization Area and Polyrectification Area) to produce a non-listed chemical, polyvinyl acetate.

Moreover, AAR Area units are not exempt from 40 CFR 60, Subpart NNN. Pursuant to 40 CFR 63.110 (d)(4), Subpart G; compliance with 40 CFR 60, Subpart NNN is demonstrated by compliance with 40 CFR 63, Subpart G. Paragraph 3(o) for applicable regulations on page 20 of the Statement of Basis and permit was changed to read the following:

> *40 CFR 60, Subpart NNN, Standards of Performance for Volatile Organic Compound (VOC) Emissions From Synthetic Organic Chemical Manufacturing Industry (SOCMI) Distillation Operations, is applicable to the AAR Area units; however, pursuant to 40 CFR 63.110(d)(4), Subpart G, compliance with 40 CFR 60 Subpart NNN can be shown by compliance with 40 CFR 63, Subpart G.*

Also, paragraph 4(c) for non-applicable regulations on page 20 of the Statement of Basis and permit was changed to read the following:

> *40 CFR 60, Subpart NNN, Standards of Performance for Volatile Organic Compound (VOC) Emissions From Synthetic Organic Chemical Manufacturing Industry (SOCMI) Distillation Operations, is not applicable to the Polymerization Area units, as these units do not produce chemicals listed under 40 CFR 60.667. This rule is not applicable to the Polyrectification Area, as well, because chemical recovery is exempt from this regulation since the distillation operation, which is used to recover and purify a listed feedstock chemical, vinyl acetate, for reuse in the same process unit (Polymerization Area and Polyrectification Area) to produce a non-listed chemical, polyvinyl acetate.*

3) **Use and applicability of 401 KAR 63:020, Potentially Hazardous Matter or Toxic Substances.**

#3A. As a general comment, Celanese objects to the inclusion of 401 KAR 63:020 as an applicable requirement to its operations and in particular to the statement of the following as an "Emission Limitation:"

> *"Pursuant to 401 KAR 63:020, no owner or operator shall allow any affected facility to emit potentially hazardous matter or toxic substances in such quantities or duration as to be harmful to the health and welfare of humans, animals and plants."*

This general statement from the regulation fails to provide a clear standard by which Celanese can judge its conduct. The provision is so vague that it unfairly exposes Celanese to the risk of legal action.

Accordingly, the cited "limitation" and 401 KAR 63:020 generally should not be included in the permit.

#3B. If KDAQ rejects Comment #3A, Celanese requests that KDAQ delete the applicability of 401 KAR 63:020 to each affected facility that is subject to a MACT standard. Specifically, pursuant to Section 1 of 63:020, the provisions of this rule apply to each affected facility that emits potentially hazardous matter or toxic substances provided such emissions are not elsewhere subject to the provisions of the Title 401 of Kentucky Administrative Regulations.

Since the following process areas are subject to the specified MACT standards that are incorporated by reference in 401 KAR 63:002, these areas were incorrectly determined to be applicable to 401 KAR 63:020:

- Polymerization Area – MON MACT;
- Saponification Area – MON MACT;
- Polyrectification Area – MON MACT;
- Tank Farm – MON and HON MACTs; and
- Loading Area – MON and HON MACTs.

(Celanese recognizes that the MON has a future compliance date but the schedule is part of the regulation that is incorporated into the Kentucky standards and represents a judgment by the regulatory authorities as to the timing for existing sources to meet the standards.) Therefore, pursuant to 401 KAR 63:020, Section 1, since the HAP emissions from these areas shown above are "elsewhere subject" to KDAQ regulations, 401 KAR 63:020 by its own terms is not applicable to the emission units in this area. This conclusion is consistent with Paragraph (4)(k) at page 21 of the Statement of Basis.

Celanese has reviewed other Title V permits issued by KDAQ recently and the non-applicability determination will be consistent with the permit language in those permits. For example, Aristech Acrylics (V-05-090) operates a process area subject to the MON MACT. In the draft version of the Title V permit, citations to 401 KAR 63:020 were initially included. Based on comments by the facility in regards to the applicability of the MON MACT, the KDAQ chose to eliminate both the applicability and compliance demonstration for 401 KAR 63:020 in the final Title V permit. Similar applicability determinations are apparent in the final Title V permit for General Motors (V-06-013). The relevant sections of these permits are included in Attachment 3.

Accordingly, please delete the following sections related to 401 KAR 63:020 of the draft Title V permit and Statement of Basis:

Page 6 of 162 of the Permit, Applicable Regulations.
Page 8 of 162 of the Permit, Emission Limitations, Condition 2.b.
Page 11 of 162 of the Permit, Compliance Demonstration Method, Paragraph b.
Page 27 of 162 of the Permit, Applicable Regulations.
Page 30 of 162 of the Permit, Emission Limitations, Condition 2.d.
Page 33 of 162 of the Permit, Compliance Demonstration Method, Paragraph e.
Page 47 of 162 of the Permit, Applicable Regulations.
Page 50 of 162 of the Permit, Emission Limitations, Condition 2.b.
Page 53 of 162 of the Permit, Compliance Demonstration Method, Paragraph b.
Page 96 of 162 of the Permit, Applicable Regulations.
Page 102 of 162 of the Permit, Emission Limitations, Condition 2.b.
Page 104 of 162 of the Permit, Compliance Demonstration Method, Paragraph b.
Page 121 of 162 of the Permit, Applicable Regulations.
Page 123 of 162 of the Permit, Emission Limitations, Condition 2.a.
Page 125 of 162 of the Permit, Compliance Demonstration Method, Paragraph a.
Page 19 of 24 of the Statement of Basis, Applicable Regulations, Paragraph (l)

Division's Response: Comment acknowledged. 401 KAR 63:020, Potential hazardous matter or toxic substances, is applicable to a facility that emits or may potentially emit hazardous or toxic substances provided such emissions are not elsewhere subject to the provisions of the administrative regulations of the Division. The requirements of 401 KAR 63:020 for facility emissions of organic HAP compounds are not applicable to the emission units that are controlled due to 40 CFR 63, Subparts F, G, H or FFFF. The Division has changed the language on pages 11, 33, 52, 69, 105, 126 and 140 of the proposed permit and the last sentence of paragraph (l) on page 19 of the statement of basis to read the following:

For compliance with 401 KAR 63:020, if the source alters process rates, material formulations, or any other factor that would result in an increase of HAP emissions or the addition of HAP emissions not previously evaluated by the Division, the source shall submit the appropriate application forms pursuant to 401 KAR 52:020, along with documentation to show that 401 KAR 63:020 is not applicable or information that shows that the facility will remain in compliance with 401 KAR 63:020.

4) **The Draft Title V Permit identifies 401 KAR 63:020 as an applicable requirement for the Wedco Process Area and for Warehouse Fugitives. These affected facilities are not subject to the MACT standards identified above. However, the agency has not given a basis for concluding that 401 KAR 63:020 should apply to those facilities.**

The Statement of Basis does not set out an evaluation of pollutants or impacts or otherwise explain the agency's rational for a determination of regulatory applicability to the Wedco Process Area or Warehouse Fugitives. In short, the record does not establish that KDAQ has made the requisite individual assessment of the facility as required by Section 3 of 401 KAR 63:020. Accordingly, the permit should be revised to delete the references to 401 KAR 63:020 in the sections dealing with the Wedco Process Area and Warehouse Fugitives.

Division's Response: Comment acknowledged; the Division will not make the request changes. 401 KAR 63:020, Potential hazardous matter or toxic substances, is applicable for facilities in the Wedco Process Area and Warehouse Fugitives because there are hazardous air pollutant substances (HAPs) such as methanol, present in these areas. Compliance Demonstration Method has been revised (Refer to response to comment #3).

5) **For those emission units that are not subject to a MACT, and to which DAQ intends, despite the preceding comments, to apply 401 KAR 63:020 as an applicable requirement in the final permit, the permit language should be revised to provide for a case by case determination by KDAQ of the information needed to assess applicability based on the permit revision submittal under 401 KAR 52:020, rather than specifying a modeling requirement.** Celanese understands that any source modification which triggers the applicability criteria in 401 KAR 52:020 requires a permit revision application be submitted to KDAQ with appropriate application forms; however, Celanese believes that the requirement for air quality modeling in addition to application forms has no regulatory basis with each permit revision application.

Moreover, the final permits for other sources have not contained these types of conditions. For example, the final permits issued to both Aristech Acrylics and General Motors do not require compliance demonstrations for 401 KAR 63:020.

Celanese requests that KDAQ utilize the same approach for Celanese's Title V permit.

If KDAQ does not eliminate the conditions as requested above, the compliance demonstration language cited for the Wedco Area and Warehouse Fugitives is unacceptable and is without a sound regulatory basis. For example, as referenced in the draft Permit, 401 KAR 63:020 is listed as an applicable regulation to the Wedco area (page 65 of 162) and Warehouse fugitives (page 139 of 162). For each of these process areas, the following compliance demonstration methodology was included in the draft permit (pages 69 and 139):

> *"…the source shall submit the appropriate application forms pursuant to 401 KAR 52:020, along with air modeling to show that the facility will remain in compliance with 401 KAR 63:020…"*

The determination regarding the applicability of 401 KAR 63:020 to a proposed project and the need for an air quality modeling analysis should be made on a case-by-case basis when a source modification application is submitted to KDAQ. A case-by-case evaluation is consistent with the currently effective language of 401 KAR 63:020. Although KDAQ has publicly stated that it intends to revamp its air toxics program, including modeling, those requirements have not yet been promulgated and so it would be premature to premise Title V permit conditions on anticipated regulatory provisions. As written, the condition purports to require an evaluation if there is any change that could result in an increase in HAP emissions or emission of a new HAP without consideration of thresholds. This condition will result in a significant operational impact with little, if any, associated environmental benefit. Therefore, given the current regulatory scheme and authority, the above compliance demonstration methodology should be revised as follows:

> Pages 69 and 139 of the draft permit, **Section B 2.a.**: Please delete the existing language and replace it with the following:
>
> ~~*For compliance with 401 KAR 63:020, if the source alters process rates, material formulations, or any other factor that would result in an increase of HAP emissions or the addition of HAP emissions not previously evaluated by the KDAQ, the source shall submit the appropriate application forms pursuant to 401 KAR 52:020., along with air modeling to show that the facility will remain in compliance with 401 KAR 63:020. The source may perform a screening analysis of the potential to emit of methanol, methyl acetate, and any other toxic pollutant emissions at the plant and compare it to established benchmarks (i.e. Reference Concentrations (RfCs), Unit Risk Estimates (UREs), as applicable).*~~ ***For modifications that require issuance of a permit***

> ***revision, KDAQ may request additional information for purposes of demonstration of compliance with 401 KAR 63:020, based on the evaluation of the emissions of hazardous matter and toxic substances provided in the application submittal. Insignificant activities are excluded from this requirement.***

This revision will help focus the company's and the agency's resources and provide some balance to the process.

Division's Response: Comment acknowledged; refer to response to comment #3.

6) **KDAQ has publicly stated that it intends to repeal 401 KAR 63:020 and move forward with a re-vamped air toxics program. Celanese wants to preserve the ability to revisit the permit conditions that are based on 401 KAR 63:020 in the event the regulation is repealed.**

As noted above, KDAQ has publicly stated that it intends to repeal 401 KAR 63:020 and move forward with a re-vamped air toxics program. The filing of a regulatory package is reportedly planned for later this month. Celanese is understandably concerned that their Title V permit not contain conditions that are likely to be outdated within a short time of issuance. If KDAQ rejects its specific comments as set out above and moves forward with inclusion of conditions based on 401 KAR 63:020 under these circumstances, Celanese specifically requests that KDAQ recognize the company's ability to seek revision of its permit based on future revisions to the air toxics program without regard to claims of backsliding.

Division's Response: Comment acknowledged. Celanese may apply for a permit modification whenever it desires.

7) **As a general comment, it appears that the permit includes portions of the applicable MACT regulations but not a complete recitation.** Also there are instances where the regulatory language appears to have been paraphrased. In order to assure that the permit accurately reflects the regulatory requirements, Celanese requests either that the conditions simply cross-reference the regulatory provisions or that the language be revised to utilize the wording as set out in the particular regulatory section. Some examples of appropriately reworded conditions are presented below.

Page 79 of the draft permit, **Section B 2.a.**: Please modify **Condition 1.g.(i)** to add the following language as stated in the regulation it references:

> (i) Each piece of pipeline equipment subject to 40 CFR 63 Subpart H shall be identified such that it can be distinguished readily from equipment that is not subject to 40 CFR 63 Subpart H. **Identification of the equipment does not require physical tagging of the equipment. For example, the**

> **equipment may be identified on a plant site plan, in log entries, or by designation of process unit boundaries by some form of weatherproof identification.** [40 CFR 63.162(c)]

Page 75 of 162 of the permit, **Operating Limitations: Condition 1.d.** To be consistent with other permit conditions, include the regulatory citation **§ 63.113 (a)(1)** for this condition.

Additionally, Page 77 of 162 of the permit, **Emission Limitations: Condition 2.a.** should be revised accordingly. Moreover, Celanese requests the KDAQ include the exemption specified in **§63.162(b) of NESHAP Subpart H** in this condition.

Page 78 of 162 of the permit, **Emission Limitations: Condition 2.b.(vi).** 40 CFR § 63.168 (j) states that

> "*Any equipment located at a plant site with fewer than 250 valves in organic HAP service is exempt from the requirements for monthly monitoring and a quality improvement program. Instead, the owner or operator shall monitor each valve in organic HAP service for leaks once each quarter, or comply with paragraph (d)(3) or (d)(4) of this section except as provided in paragraphs (h) and (i) of this section."*

Celanese requests that this exemption (**40 CFR § 63.168 (j)**) be included with this permit condition as well.

In summary, if permit language rather than references are included, Celanese requests that KDAQ perform an independent review of applicable MACT provisions to include all applicable provisions verbatim. Whatever approach is chosen, in the event of a discrepancy between the permit language and the regulation, it is Celanese's understanding the Celanese can look to the actual language in the regulation as the final authority unless there is an explicit explanation of the difference in the Statement of Basis.

Division's Response: Comment acknowledged

(a) On page 76 of 162 in the draft (page 75 in the proposed), operating condition 1.g (i) was modified as requested (not on page 79, Section B.2.a.) In regards to the general comment, state specific places in the permit where regulations are cited, and language needs to be added or modified in the permit for evaluation by the Division.

*(b) On page 75, **Operating Limitations: Condition 1.d.** 40 CFR 63.113 (a)(1) was added as requested.*

*(c) On page 77, **Emission Limitations: Condition 2.a.** was changed to include the following:*

Except as provided in 40 CFR 63.162 (b) of NESHAP Subpart H.

*(d) On page 77, **Emission Limitations: Condition 2.b. (vi).** 40 CFR 63.168 (j) was added as requested.*

8) **The exemption thresholds found in 40 CFR 63, Subpart H, 40 CFR § 63.160, *National Emission Standards for Organic Hazardous Air Pollutants for Equipment Leaks* regarding surge control vessels and bottoms receivers should be applied to eight vessels in the Acetic Acid Recovery area.**

Pages 72-74 and 77 of the permit, **Acetic Acid Recovery Area, Emission Unit Index Table and Condition 2.a.** Regulation 40 CFR § 63.170 states that each surge control vessel or bottoms receiver has to meet the applicability criteria in Table 2 of NESHAP Subpart H. The emission units that meet these applicability criteria are required to be equipped with a closed-vent system that routes the organic vapors vented from the surge control vessel or bottoms receiver back to the process or to a control device. Table 2 and 3 to NESHAP Subpart H pertains to the surge-control vessels and bottom receivers at existing and new sources, respectively. For existing and new sources, the applicability capacity threshold is 75 m^3 (19,813 gallons) and 38 m^3 (10,039 gallons), respectively. KDAQ has determined in the emission unit index table that F01(2D), F01(3D), F01(4C), F01(5C), F01(6C), F01(7C), F01(6B), and D01(7D) are subject to the provisions of this rule. As indicated below, none of these listed units have capacities greater than the applicability threshold for new or existing sources. Therefore, these units should be exempt from the provisions of 40 CFR 63 Subpart H. Specifically, on Pages 72-74 of the draft permit, **Acetic Acid Recovery Area, Emission Unit Index Table**, please revise the following emission points by deleting the HON applicability.

F01(2D) – East MeAc extraction tower reflux drum (FA-5331) – 2,538 gallons
F01(3D) – West MeAc extraction tower reflux drum (FA-5309) – 5,299 gallons
F01(4C) – Aldehyde tower reflux drum (FA-5311) – 1,018 gallons
F01(5C) – Methanol reflux drum (FA-5312) – 9,000 gallons
F01(6C) – Crude acid tower reflux accumulator (FA-5325) – 1,183 gallons
F01(7C) – Product acid reflux drum (FA-5328) – 1,648 gallons
F01(6B) – Crude acid condenser (EA-5328) – 1,648 gallons
F01(7D) – Sludge still (FA-5319) – 1,600 gallons

Division's Response: Comment acknowledged; the Division made the requested changes to the permit.

9) **The list documenting emission points subject to Section B <u>Group Requirements</u> should be updated with the following based on comments 10 through 14 below.**

Page 141 of the draft permit, **<u>GROUP REQUIREMENTS</u>**: Please replace list with the following:

--(--)	**GROUP REQUIREMENTS**
F01(11-)	Polymerization Line 50 Reactors and Auxiliary Equipment
F01(12-)	Polymerization Line 100 Reactors and Auxiliary Equipment
F01(13-)	Polymerization Line 100 Stripper and Auxiliary Equipment
F01(14-)	Polymerization Line 150 Reactors and Auxiliary Equipment
F01(15-)	Polymerization Line 150 Stripper and Auxiliary Equipment
P02	Polymerization Line 50 Catalyst Preparation Tanks **(2)**
P05	Polymerization Line 100 Catalyst Preparation Tanks **(2)**
P08	Polymerization Line 150 Catalyst Preparation Tanks **(2)**
S01**(A-D)**	Saponification Process Unit
S02**(A-D)**	Saponification Process Unit Drying
S04	200 Saponification Line Product Transfer Collector
S08	250 Saponification Line Product Transfer Collector
S12	400 Saponification Line Product Transfer Collector
S16	600 Saponification Line Product Transfer Collector
W01	200 WEDCO Line Transfer and Grinding
W04	250 WEDCO Line Transfer and Grinding
W07	400 WEDCO Line Transfer and Grinding
W11	600 WEDCO Line Intermediate Grinding/Sizing
W14-W25	WEDCO Silos #1 - #4, #7 - #15
W26-W28	WEDCO Ground Silos #15 - #17
W29	WEDCO Bulk Loading
W33	Bagging Operation: Filling - Sackmatic, PA-5716
W34	Bagging Hopper, FB-5723
W36	Bagging Area Fugitives
W37	North Bulk Truck Loading Station
W38	South Bulk Truck Loading Station
~~F01(2A), A01~~	~~East Methyl Acetate Extraction Tower, DA-5300~~
~~F01(3A), A02~~	~~West Methyl Acetate Extraction Tower, DA-5304~~
F01(5A)~~, A04~~	SAP Methanol Tower, DA-5303
F01(9A)	Vinyl Recovery Tower, DA-5104
R02	**Vinyl Recovery Tower Startups**
F01(10A)	Vinyl Extraction Tower, DA-5110
R03	**Vinyl Extraction Tower Startups**
A07	Dilute Acid Tank Condenser, EA-5340
A08	Three (3) Acetic Acid Rundown Tanks, FA-5322A/B/C
R04	Inhibitor (BQ) Feed Tank, FA-5109
F01(18-)~~West Tank Farm Nest~~	**Two (2) West Tank Farm Nest, FB 5509-10**
T01	**Methyl Acetate/Methanol Storage Tank, FB-1513**
T05	Methanol Storage Tank, FB-5531
T06	~~Methanol Saponification Tank System~~ **Four (4) Methanol Saponification Tank System, FB5532-35**
T07	**North** Mother Liquor Storage Tank, FB-5536
T08	**South** Mother Liquor Storage Tank, FB-5537
T09	Methyl Acetate/Methanol Storage Tank**, FB-5538**

F01(19A-19C) ~~Recovered Vinyl Acetate Rework Storage Tanks~~ **Recovered Vinyl Acetate Rework Storage Tanks (3), FB-5521, FB-5522 and FB-5523**
T11 ~~Acetic Acid Tanks~~ **Four (4) Acetic Acid Tanks, FB-5101-03, 1517**

Division's Response: Comment acknowledged; the Division will make all of the changes to the permit except for the deletion of F01 (2A), A01 and F01 (3A), A02.

10) **Certain emission points have not been included in Section B <u>Group Requirements</u> paragraph 2.a. as originally shown in Permit No. S-95-198R.** Please incorporate all emission points described in this permit.

Page 143 of the draft permit, **Section B 2.a.**: Please delete the following:
F01(2A) *{this emission unit only emits methyl acetate, which is not a VOC, therefore this unit is not necessary to preclude being subject to PSD.}*

Page 143 of the draft permit, **Section B 2.a.**: Please insert the following:
R02, R03, F01(14-), F01(15-), S02(A-D), T01, P02, P05, R04, F01(18-), T06, and T11.

Division's Response: Comment acknowledged; the Division will make the following changes to the permit and emission and operating caps in the Statement of Basis. The Division will not delete F01 (2A) nor add R04. The facility may report zero VOC emissions for methyl acetate.

11) **Certain emission points have not been included in Section B Group Requirements paragraph 2.a. as originally shown in Permit No. C-84-146.** Please incorporate all emission points described in this permit.

Page 143 of the draft permit, **Section B 2.b.**: Please insert the following:
P02, P05, F01(14-), F01(15-), S02(A-D), A07, R04, F01(18-), T06, T09, and T11.

Division's Response: Comment acknowledged; the Division will make the requested changes to the permit except for adding R04.

12) **One emission point was not included in Section B Group Requirements paragraph 2.d. as originally shown in Permit No. C-84-146.** Please incorporate this emission point described in this permit.

Page 143 of the draft permit, **Section B 2.d.**: Please insert the following:
W29

Division's Response: Comment acknowledged; the Division will make the requested changes to the permit.

13) **Certain emission points have not been included in Section B Group Requirements paragraph 4.a.** Please incorporate all emission points described in C-84-146.

Page 145 of the draft permit, **Section B 4.a.**: Please insert the following:

(xvii) The throughput for Methyl Acetate/Methanol Storage Tank, FB-1513 (T01),
(xviii) The number of startups for Vinyl Recovery Tower (R02),
(xiv) The number of startups for Vinyl Extraction Tower (R03),
(xx) The throughput for Polymerization Line 100 Catalyst Preparation Tanks (P05).
(xxi) The throughput for Polymerization Line 150 Catalyst Preparation Tanks (P08).

Division's Response: Comment acknowledged; (xvii) has been used. The Division added the requested items to that particular section as (xviii) through (xxii).

14) **Regarding the conditions stated in Section B Group Requirements paragraph 2.a. and 2.b., the current conditions are ambiguous and provide unreliable means to base continuous compliance.** As reflected in prior correspondence and submittals, this source previously accepted synthetic limits on VOC emissions to preclude the applicability of 401 KAR 51:017, *Prevention of Significant Deterioration of Air Quality*. Historically, these limits are reflected in Permits S-95-198R and C-84-146 which apparently were drafted with the intent of comparing increases to baseline VOC emissions at the time (i.e., 1997 and 1982-83). KDAQ most recently did a review in 2000 of VOC emissions since the 1998 and 1984 permits were issued and concluded that a baseline of 1030 tons per year was representative of the conditions in 1984 based on the best evidence still available. The same KDAQ evaluation determined the 1997 baseline emissions to be 200 tons per year.[1] (See the April 13, 2007 letter from Celanese to Mr. Gosney with KDAQ Memo, attached hereto as Attachment 4.)

In order to provide greater clarity for demonstrating compliance, Celanese is requesting that the Title V permit establish a fixed value of **1,070** tons per consecutive twelve (12) month period for a set number of emission points, which represents synthetic limit established in 1984 (i.e., 1,030 tpy baseline plus the 40 tpy increase in VOC emissions). In addition, Celanese is requesting that the Title V permit establish a fixed value of **240** tons per consecutive twelve (12) month period for a set number of emission points, which represents synthetic limit established in 1998 (i.e., 200 tpy baseline plus the 40 tpy increase in VOC emissions).

Certainly, one of the goals of the Title V permitting process is to synthesize permit requirements with regulatory basis and develop straightforward compliance demonstration methods where possible. For that reason, Celanese requests that the fixed annual emission limit as opposed to an emission limit that references ambiguous VOC increases for the specified EPs.

It should be noted that the actual emissions of VOCs from the mentioned sources have been dramatically reduced since the 1982-83 baseline. Since that time the VOC emissions have been reduced for various reasons, some of which are:

- Increased the capture efficiency of the product transfer operations,
- Added a vent scrubber on the SAP line,
- De-listing of methyl acetate as a VOC,
- Added internal floating roofs to various tanks,
- Changed tank service on T01 from vinyl acetate to methyl acetate/methanol,
- Added an additional wet scrubber to control the emissions of various tanks, and
- The current implementation of the MON project that encompasses the Polymerization, Saponification, Polyrectification, Tank Farm, Flare, Loading, and Cooling Towers.

Specifically, please revise **Emission Limitations B 2.a. and B 2.b.** as follows:

a. The total ~~increase in~~ emissions of volatile organic compounds (VOC) ~~from the 1998 emissions survery (actual emissions in 1997) to present,~~ from the summation of emissions from EP ~~F01(2A),~~ F01(5A), F01(9A), F01(10A), F01(11-), F01(12-), F01(13-), F01(19-), P08, S01**(A-D)**, W01, W04, W07, W14-W25, W29, A08, T05, T07, ~~and~~ T08**, R02, R03, F01(14-), F01(15-), S02(A-D), T01, P02, P05, R04, F01(18-), T06, and T11** shall not exceed ~~40~~**240** tons per year. [Permit No. S-95-198R, issued on June 4, 1998]

b. The total ~~increase in~~ emissions of VOC from ~~the 1984 emissions survey (actual emission in 1983) to present, from~~ the summation of emissions from EP F01(11-), F01(12-), F01(13-), F01(19-), P08, S01**(A-D)**, A08, T05, T07, ~~and~~ T08, **P02, P05, F01(14-), F01(15-), S02(A-D), A07, R04, F01(18-), T06, T09, and T11** shall not exceed ~~40~~**1,070** tons per year. [Permit No. C-84-146, issued on August 21, 1984].

Division's Response: Comment acknowledged. A meeting was held on June 6, 2007 between Celanese representatives and the Division to discuss the comments on the draft permit. Additional information was received via electronic mail on June 12, 2007 that included an updated VOC emission baseline on the permitted emission units from permit C-84-146 and S-95-198R. The Division will revise the Emission Limitations B 2.a and B 2.b of the Group Requirements and the Emission and Operating Caps Description in the statement of basis to read as the following:

a. *The total emissions of volatile organic compounds (VOC) from the summation of emissions from EP F01(2A), F01(5A), F01(9A), F01(10A), F01(11-), F01(12-), F01(13-), F01(19-), P08, S01(E1-H1), W01, W04, W07, W14-W25, W29, A08, T05, T07, T08, F01(14), F01(15-), R02, R03, S02(A1-D5), T01, P02, P05, F01(18-), T06, and T11 shall not exceed 127 tons per year. [Permit No. S-95-198R, issued on June 4, 1998]*

b. *The total emissions of VOC from the summation of emissions from EP T01, F01(11-), F01(12-), F01(13-), F01(19A-19C), P08, S01(E1-H1), A08, T05, T07, T08, P02, P05, F01(14-), F01(15-), S02(A1-D5), A07, F01(18-), T06, T09, and T11 shall not exceed 247 tons per year. [Permit No. C-84-146, issued on August 21, 1984]*

15) **Revise the compliance demonstration method for VOC emissions in the Group Requirements of Section B. The current permit language stated is general in nature and does not apply to those emissions units calculated with industry specific emissions calculation methodology (i.e., TANKS, ASPEN, Emissions Master, etc.).**

Page 144 of the draft permit, **Section B, <u>Compliance Demonstration Method</u>: paragraph 2.a.**: Please consider using the following language:

a. Calculate the VOC emissions from the emission units specified in each limit of **2. <u>Emission Limitations</u>** paragraphs **2.a, 2.b., and 2.c.**, as follows in **(i) or (ii)**:

(i) Use of industry specific emissions calculation methodology and associated recordkeeping, or

(ii) Monthly Emission Rate = $\sum_{i=1}^{n}$ [monthly production rate (tons) per emission unit] x EF x (1 – CE/100)

Where: i = the emission unit
n = the number of emission units included in the emission limit
EF = emission factor (lb/ton process weight, based on the most recent stack test, material balance**, engineering estimates,** or other factor approved by the KDAQ or **U.S. EPA**)
CE = control efficiency (%)

Annual Emission Rate = $\sum_{i=1}^{n}$ [VOC emitted this month + VOC emitted previous 11 consecutive months]

Division's Response: Comment acknowledged; the Division made the requested changes.

16) **F01(4A) - Aldehyde Tower (DA-5302), F01(7A) - Product Acid Tower (DA-5309), F01(2A) - West MeAc Extraction Tower (DA-5304), and F01(3A) - East MeAc Extraction Tower (DA-5300) were included in the Section B, Group Requirements; however, these limits are not necessary to preclude the applicability of 401 KAR 51:017, *Prevention of Significant Deterioration of Air Quality*.** The emission units F01(4A) and F01(7A) were never included in the emission limits stated in S-95-198R. Furthermore, both F01(2A) and F01(3A) emit methyl acetate, which is not a VOC. Therefore, these units should not be part of **Group Requirements**. The operating limitations for each of these units should be included in the **Acetic Acid Recovery Area** of **Section B**, with appropriate reference to the operating limits and compliance methodology. Therefore, Celanese requests the following:

> Page 142 of the draft permit, **Section B Operating Limitations: paragraph 1.b.**: Please delete reference to F01(3A). Move operating limit to AAR Area.
>
> Page 143 of the draft permit, **Section B Operating Limitations: paragraph 1.c.**: Please delete reference to F01(2A), F01(4A), and F01(7A). Move operating limits to AAR Area.
>
> Page 143 of the draft permit, **Section B Emission Limitations: paragraph 2.a.**: Please delete reference to F01(2A). The emissions from processing methyl acetate do not preclude applicability of PSD for VOC as is the intent of the **Group Requirements**.
>
> Page 145 of the draft permit, **Section B Site-Specific Requirements: paragraph 4.a.(v)**: Please delete reference to F01(2A), F01(3A), and F01(4A). Without emission and operating limitations, it is not necessary to require tracking of production.

Division's Response: Comment acknowledged. The maximum processing rate for emission units F01(4A) and F01(7A) are already listed in description of the emission units in Section B of the permit. The requirements in the Section B Group Requirements for F01(4A) and F01(7A) are not to preclude PSD and have been deleted. Concerning F01(2A) and F01(3A), refer to response to comment #10.

17) **Opacity and Pressure Drop Observation Frequency for Process Equipment.** KDAQ has included weekly opacity observation requirement from several process equipment at the Calvert City plant. The particulate emissions from all these equipment are controlled by baghouses having a control efficiency of at

least 99%. The actual emissions from each of these equipment are less than the allowable particulate emission rates calculated in accordance with 401 KAR 59:010, *New Process Operations*. Moreover, the Calvert City plant had no visible emissions deviations in 2005 and 2006. According to an email correspondence between KDAQ and Ms. Rhonda Perry of Celanese, it was determined that the KDAQ would re-visit the monitoring frequency after continued compliance is demonstrated for a period of one year.[2] Therefore, due to continuous operation of control equipment, low actual PM emissions profile, and continued compliance with all permit limits, Celanese requests that the visible emissions and pressure drop monitoring frequency should be reduced to monthly.

For illustration purposes, revisions to Conditions 4.b.(i) and (ii) (EP S04, S08, S12, and S16) are presented below:

4. <u>Specific Monitoring Requirements</u>:

a. Refer to **Section B, Group Requirements**.

b. The permittee shall also perform the following monitoring:

(i) A qualitative visual observation of the opacity of emissions once each calendar ~~week~~ **month** while operating each Product Transfer Collector at EP S04, S08, S12, and S16. If visible emissions are seen (not including condensed water vapor within the plume), the permittee shall perform an EPA Reference Method 9 test for opacity on the applicable stack emissions within 24 hours of observing visible emissions, and make any necessary repairs to bring the opacity into compliance.

(ii) The pressure drop across each dust collector once each calendar ~~week~~ **month**.

Celanese requests that similar revisions are also made to the following Section of the draft Title V permit:

Wedco Process Area, Page 70 of 162, Condition 4.b.(i) and (ii)

Division's Response: Comment acknowledged. Monitoring is a part of the compliance demonstration method for the opacity limit. The Division made the requested changes on pages 36 and 70 in the proposed permit.

18) **Categorization of Vent Scrubbers as Recovery Devices.** KDAQ has made a determination that on pages 22 and 24 of the draft Title V permit and pages 5 and 6 of the statement of basis that 600 SAP Vent Scrubber (DA-5602/DA-5604) and Main Vent Scrubber (DA-5605) are MON recovery devices and based on total

resources effectiveness (TRE) calculations these are classified as Group 2 process vents.

In the MON rule, a recovery device must recover chemicals from a process vent for reuse within the same affected source (i.e., the PVOH MCPU). In the Saponification unit, four scrub towers that operate in series with one main vent scrubber recover material from process gas streams and either recycle it within the scrubber, or route the recovered material outside of the PVOH MCPU to the HON-affected methanol recovery unit (a different affected source). Under the HON rule, the vent scrubber would be considered a recovery device. According to U.S. EPA, since the MON rule has established the HON rule as standard for continuous process vents, the HON's definition of recovery device applies to continuous process vents

Based on this understanding, the SAP unit's scrubbers are considered to be recovery devices; therefore, the process vent group determination is based on a TRE calculation performed on the discharge from the scrubber system (after the last recovery device). This in essence precludes the vent scrubber from being a control device.

Celanese believes that KDAQ agrees with the TRE determinations; therefore, Group 2 process vent applicable provisions from the MON rule are included in the Saponification area. Therefore, Celanese requests KDAQ to revise pages 22 and 24 of the draft Title V permit and pages 5 and 6 of the Statement of Basis as follows:

S01 (--)	**Description: Saponification Process Unit**, consisting of Four (4) Parallel Production Lines ~~Control~~ **Recovery** Device: Countercurrent, crossflow packed bed scrubber, identified as 600 SAP Vent Scrubber, DA-5602/DA-5604. 600 SAP Vent Scrubber, DA-5602/DA-5604, is a MON Recovery device and a MON Group 2 Process Vent Scrubbing Liquid: Water, methanol and methyl acetate Scrubbing Liquid Flow Rate: 35 gal/min on or before the compliance date in 40 CFR 63.2445(b) for compliance with 40 CFR 63, Subpart FFFF; 16.3 gal/min prior to compliance with Subpart FFFF Control Efficiency: 99% for Methyl Alcohol, 99% for Methyl Acetate on or before the compliance date in 40 CFR 63.2445(b) for compliance with 40 CFR 63, Subpart FFFF; 96% for Methyl Acetate prior to compliance with Subpart FFFF Construction Date: 1985

S02 (--)	**Description: Saponification Process Unit Drying** ~~Control~~ **Recovery** Device: Countercurrent packed bed scrubber, identified as Main Vent Scrubber, DA-5605. Main Vent Scrubber, DA-5605, is a MON Recovery device and a MON Group 2 Process Vent Scrubbing Liquid: Water, methanol and methyl acetate Scrubbing Liquid Flow Rate: 50 gal/min on or before the compliance date in 40 CFR 63.2445(b) for compliance with 40 CFR 63, Subpart FFFF; 25 gal/min prior to compliance with Subpart FFFF Control Efficiency: 99% for Methyl Alcohol, 82% for Methyl Acetate on or before the compliance date in 40 CFR 63.2445(b) for compliance with 40 CFR 63, Subpart FFFF; 66% for Methyl Acetate prior to compliance with Subpart FFFF Construction Date: 1987

Division's Response: Comment acknowledged. The bed scrubber at emission points S01 (--) and S02 (--) are control devices but also recovery devices for the MON. The Division will change the description to "Recovery/Control (Recovery device as defined in the HON and MON regulations)" device.

19) **Clarification Regarding Continuous Monitoring and Recordkeeping.** Pursuant to 40 CFR § 63.981 (*National Emission Standards for Closed Vent Systems, Control Devices, Recovery Devices, and Routing to a Fuel Gas System or a Process*), *"continuous record"* is defined as any documentation, either in hard copy or computer readable form, of data values measured at least once every 15 minutes and recorded at the frequency specified in § 63.998(b). Moreover, pursuant to 40 CFR § 63.998 (b)(1), values that are recorded and monitored at least once every 15 minutes meet the definition of *"Continuous records."* 40 CFR § 63.998 (b)(2) also clarifies that monitored data collected during SSM events, maintenance periods, calibration checks, and other listed periods will not be included in averages computed to determine compliance with emission limits.

Celanese requests that the clarification regarding continuous records and excluded records is included for the following sections of the Title V permit since NESHAP Subpart SS is applicable to these process areas:

Page 3 of 162, Polymerization Area
Page 22 of 162, Saponification Area
Page 46 of 162, Polyrectification Area
Page 96 of 162, Tank Farm

Suggested revisions for Polymerization area are presented below for illustration purposes:

5. <u>Specific Recordkeeping Requirements</u>:

a. Pursuant to 40 CFR § 63.981, *"continuous record"* is defined as any documentation, either in hard copy or computer readable

form, of data values measured at least once every 15 minutes and recorded at the frequency specified in § 63.998(b).

b. Pursuant to 40 CFR § 63.998 (b)(1), values that are recorded and monitored at least once every 15 minutes meet the definition of *"Continuous records."*

4. <u>Specific Monitoring Requirements:</u>

a. Pursuant to 40 CFR § 63.998 (b)(2), Monitoring data recorded during the following periods shall not be included in any average computed to determine compliance with an emission limit in a referencing subpart.

(i) Monitoring system breakdowns, repairs, preventive maintenance, calibration checks, and zero (low-level) and high-level adjustments;

(ii) Periods of non-operation of the process unit (or portion thereof), resulting in cessation of the emissions to which the monitoring applies; and

(iii) Startups, shutdowns, and malfunctions, if the Permittee operates the source during such periods in accordance with §63.1111(a) and maintains the records specified in § 63.998(d)(3).

Conditions similar to above must also be included for Saponification, Polyrectification, and Tank Farm process areas.

Division's Response: Comment acknowledged; the continuous record language will be added, as requested, but no change will be made to the permit concerning the monitoring. The regulation cited is for continuous monitors used for an emission limit. The facility needs to specify which emission limit used continuous monitoring for compliance. Refer to Section F.7 for notification and reporting emission exceedances during malfunctions, which includes monitoring system breakdowns.

20) **No identification is provided as to which emission points are subject to the synthetic limits shown in Group Requirements of Section B. Based on reading this condition, it seems that group requirements apply to all emission units in their respective areas. The following language provides more clarification:**

Pages 5, 26, 46, 67, 74, and 96 of the draft permit, **<u>APPLICABLE REGULATIONS</u>**: Please insert the following:

This source has elected to accept annual limits *for the emission points described in* ***Section B, Group Requirements*** in order to preclude the applicability of 401 KAR 51:017, Prevention of Significant Deterioration of Air Quality (PSD) for volatile organic compounds.

Division's Response: Comment acknowledged; the Division will make the requested changes to the permit.

21) **Operation of Control Equipment During Periods of Start-up, Shutdown, and Malfunction.** Pursuant to 40 CFR § 63.2450, the source is required to be in compliance with the emission limits and work practice standards at all times, except during periods of start-up, shutdown, and malfunction (SSM). Similar language is included in all MACT standards that are applicable to Celanese. Scrubbers at EP S01 and S02 are operated to demonstrate compliance with the emission limits specified in the MON MACT and are subject to the SSM criteria.

Therefore, please revise the language in Condition 7.d. of the draft permit (Page 43 of 162) as follows:

d. The scrubbers at EP S01 and S02 shall be in operation at all times when emissions are vented to them**, except during periods of start-up, shutdown, and malfunction.**

Similarly, revise the following sections of the draft permit to be consistent with the above permit condition:

Page 21 of 162, Condition 7
Page 28 of 162, Condition 1.d.(i)
Page 64 of 162, Condition 7
Page 70 of 162, Condition 7.a.
Page 88 of 162, Condition 7
Page 93 of 162, Condition 7
Page 120 of 162, Condition 7.a.
Page 120 of 162, Condition 7.b.
Page 145 of 162, Condition 7.a.
Page 146 of 162, Condition 7.c.

Division's Response: Generally, the facility should operate control equipment during a malfunction, if safe and possible. The facility does not have to meet an emission limit during a malfunction. A condition will be added to each of the Specific Control Equipment Operating Conditions of the permit to include the following language for emission units subject to 40 CFR 63.2450 (pages 21, 43, 63, 88, 93, 120 and 147 of the proposed permit):

Pursuant to 40 CFR 63.2450, you must be in compliance with the emission limits and work practice standards in Tables 1 through 7 to this subpart at

all times, except during periods of startup, shutdown, and malfunction (SSM), and you must meet the requirements specified in 40 CFR 63.2455 through 63.2490 (or the alternative means of compliance in 40 CFR 63.2495, 40 CFR 63.2500, or 40 CFR 63.2505), except as specified in paragraphs (b) through (s) of this section. You must meet the notification, reporting, and recordkeeping requirements specified in 40 CFR 63.2515, 63.2520, and 63.2525.

22) **Normal Operating Parameter Range for Control Equipment.** Several permit conditions in the draft permit specify that the normal operating parameters for the control devices will be based on manufacturer recommendations or established during recent stack test. According to applicable provisions for these control equipment, there are no valid stack testing requirements for these equipment. Moreover, the manufacturer does not specify normal operating parameter ranges for these control equipment at all times.

Therefore, Celanese request that these permit conditions are revised as follows. Revisions to condition 7.c. on page 43 of the draft permit are presented for illustration purposes:

c. The permittee shall maintain the pressure drop across each dust collector and the flow rate and temperature of the scrubbing liquid at the scrubbers at EP S01 and S02 within the range recommended by the manufacturer or **the range based on process engineering assessments that result in normal operation of the equipment.** ~~established during the most recent stack test.~~

Similarly, revise the following sections of the draft permit to be consistent with the above permit condition:

Page 120 of 162, Condition 7.d.
Page 146 of 162, Condition 7.d.

Division's Response: Comment acknowledged; the requested changes were made to the permit.

23) **Emission Factors for Flare Combustion.** Celanese understands that carbon monoxide (CO) and nitrogen oxides (NO_X) emission factors for auxiliary natural gas combustion are derived from Table 13.5-1, AP-42, Fifth Edition, September 1991. However, the CO and NO_X emission factors for waste gas combustion are derived from the document titled "*Flare CO and NOx emissions were based on factors contained in the TCEQ October 2000 RG-109 (Draft) Air Permit Technical Guidance for Chemical Sources: Flares and Vapor Oxidizers*", Page 24, Table 4.

Therefore, Celanese requests that the KDAQ includes reference to this document on page 16 of the statement of basis for the waste gas combustion emissions.

Division's Response: Comment acknowledged; the Division included the reference in the Statement of Basis.

24) **Clarification Regarding Applicable Requirements Before MON Compliance Date.** Pursuant to 40 CFR § 63.2445 (b), the compliance date for existing sources that are subject to 40 CFR 63 Subpart FFFF is May 10, 2008. The KDAQ has made a determination to include all detailed applicable requirements from this rule in the draft Title V permit. In order to preclude future compliance issues, Celanese requests that the KDAQ includes clarification in the permit that Celanese would comply with the applicable requirements of the rule no later than the compliance date specified in 40 CFR § 63.2445 (b). The KDAQ has included a permit condition with this clarification on page 7 of 162 in paragraph **1.b.** in the draft permit for the Polymerization area. However, no clarifying condition is included for other process areas to which this rule is applicable.

Celanese requests that the following federally enforceable condition is included for Saponification area (page 28 of 162), Polyrectification area (page 48 of 162), Tank Farm (page 97 of 162), and Loading area (page 121 of 162):

a. The permittee shall comply with all applicable provisions of 40 CFR Part 63, Subpart FFFF no later than the compliance date of specified in 40 CFR 63.2445(b).

Division's Response: Comment acknowledged; the Division made the requested changes to the permit.

B. ADMINISTRATIVE/EDITORIAL COMMENTS

25) **Administrative/Editorial Changes to Permit Language.** There are some spelling mistakes and other phrases needing grammatical correction present in the permit documents that Celanese would like to have corrected. In addition, some editorial changes to wording in the Permit Statement of Basis and permit are warranted. The specific requested changes are reflected in the mark-ups shown on the permit documents will be providing it shortly after the comment letter submittal. Besides the editorial changes, Attachments 5 and 6 contain the revised nomenclature changes to the Statement of Basis and Title V, respectively.

Division's Response: Comment acknowledged; the Division made the requested changes based on the previous responses to comments that were agreed upon.

26) **Maintenance and Operation in Accordance with Good Air Pollution Control Practices.** Pursuant to 401 KAR 50:055, Section 2(5), Celanese will maintain and operate all control equipment in accordance with good air pollution control

practices for minimizing emissions. This provision in included as a source-wide applicable requirement in Section E, *Source Control Equipment Requirements*. Moreover, proper operation and maintenance of control equipment is not just based on manufacturer's specifications or recommendations. Celanese may follow internal best management practices that it has developed based on several years of research and operating experience. It is redundant to specify in several sections of the Title V permit that Celanese shall use the manufacturer specifications or recommendations for proper operation of these equipment.

Therefore, Celanese requests that the following conditions are deleted from the permit.

Page 43 of 162, Condition 7.e.
Page 120 of 162, Condition 7.c.
Page 145 of 162, Condition 7.b.

Division's Response: Comment acknowledged; the Division made the requested changes to the permit.

ATTACHMENT B

Copy of Comments on Draft Title V